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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/665,159	09/19/2000	Yusaku Fujii	826.1621/JDH	4866

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EXAMINER

KIBLER, VIRGINIA M

ART UNIT PAPER NUMBER

2623

DATE MAILED: 06/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/665,159

Applicant(s)

FUJII, YUSAKU

Examiner

Virginia M Kibler

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-49 is/are rejected.
- 7) ☒ Claim(s) 48 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendment received on 3/8/04 has been entered. Claims 1-49 remain pending.

### ***Claim Objections***

2. Claims 48 and 49 are objected to because of the following informalities: "comparisons.." should be changed to "comparisons." in claim 48, line 8; "second finger print" should be changed to "second fingerprint" in claim 48, line 4; and "section fingerprints" should be changed to "second fingerprints" in claim 48, line 6.

Claim 49 depends on claim 48, and is thereby objected to.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-49 are rejected under 35 U.S.C. 102(e) as being anticipated by Fujii et al. (6,233,348).

Regarding claim 1, Fujii et al. ("Fujii") discloses comparing an obtained first fingerprint with a preliminarily registered second fingerprint (Col. 8, lines 23-32), and determining whether

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or not the fingerprints match each other including a ridge relation obtaining unit obtaining relation of a ridge containing a vicinal feature point near a feature point to be checked in a matching process performed on the first and the second fingerprints to the ridge containing the feature point to be checked in the matching process (Figure 4; Col. 9, lines 12-28), and a matching unit performing the matching process by searching the second fingerprint containing the vicinal feature point near the feature point to be checked in the matching process for the relation of the ridge containing the vicinal feature point to the ridge containing the feature point in the first feature point to be checked in the matching process (Col. 11, lines 58-67 and Col. 12, lines 1-2) and comparing vicinal feature points of the first and second fingerprints (Col. 8, lines 33-45; Col. 9, lines 12-19; Col. 12, lines 3-19).

Regarding claim 2, Fujii discloses the information about the feature point has a format comprising an identifier assigned to each feature point and corresponding feature information about the feature point (Col. 8, lines 33-38).

Regarding claim 3, Fujii discloses the feature points in the first and second fingerprints are the same feature points when a number of ridges from the feature point to be checked to a ridge containing the vicinal feature point is within a predetermined threshold and when the feature information about the vicinal feature points matches in a predetermined range (Col. 13, lines 15-27).

Regarding claim 4, Fujii discloses when the feature information about the vicinal feature points matches in a predetermined range, a number of ridges between the feature point to be checked and a ridge containing the vicinal feature point matches a value obtained by counting a number of ridges in an opposite direction from the feature point and a number of ridges obtained

by counting a number of ridges in a direction from the feature point to the vicinal feature point, it is determined that the feature points are the same feature points (Col. 13, lines 15-28; Figure 10).

Regarding claim 5, Fujii discloses wherein when the first and second fingerprints match in at least one of position, type, and direction of the vicinal feature points, it is determined that the feature information of feature points to be checked contained in the first and the second fingerprints are the same feature points (Col. 13, lines 28-31).

Regarding claim 6, Fujii discloses wherein when the feature points to be checked match in position and direction in a predetermined range, but are different in type, a resultant matching level is low (Col. 12, lines 11-29).

Regarding claim 7, Fujii discloses wherein when the vicinal feature points match in position and direction in a predetermined range, but are different in type a resultant matching level is low (Col. 12, lines 11-29).

Regarding claim 8, Fujii discloses wherein when the feature points to be checked are different in type, a matching process is performed by changing relation between ridges containing the feature points to be checked and the ridges containing the vicinal points (Col. 11, lines 58-67; Col. 12, lines 25-29).

Regarding claim 9, the arguments analogous to those presented above for claim 1 are applicable to claim 9. Fujii discloses a virtual feature point generation unit generating a virtual feature point by referring the first and the second feature points (Col. 8, lines 51-55), a ridge relation obtaining unit obtaining the relation of a ridge containing the virtual vicinal feature point near the feature point to be checked to the ridge containing the feature point (Figure 17), and a matching unit performing the matching process by searching the second fingerprint containing

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the virtual vicinal feature point near the feature point to be checked for the relation of the ridge containing the virtual vicinal feature point to the ridge containing the feature point (Col. 11, lines 31-57).

Regarding claim 10, Fujii discloses the information about the virtual feature point has a format comprising an identifier assigned to each virtual feature point and corresponding feature information about the virtual feature point (Col. 8, lines 33-38; Col. 19, lines 50-67).

Regarding claim 11, Fujii discloses the feature points in the first and second fingerprints are the same feature points when a number of ridges from the feature point to be checked to a ridge containing the virtual vicinal feature point is within a predetermined threshold and when the feature information about the virtual vicinal feature points matches in a predetermined range (Figure 22).

Regarding claim 12, Fujii discloses wherein when the first and second fingerprints match in at least one of position, type, and direction of the virtual vicinal feature points, it is determined that feature information of feature points to be checked contained in the first and second fingerprints are the same feature points (Col. 32, lines 5-56).

Regarding claim 13, the arguments analogous to those presented above for claim 6 are applicable to claim 13.

Regarding claim 14, Fujii discloses wherein the virtual vicinal feature points match in position and direction in a predetermined range, but are different in type a resultant matching level is low (Col. 12, lines 11-29; Col. 25, lines 31-49).

Regarding claim 15, Fujii discloses the virtual feature point is generated by projecting an existing feature point to a vicinal ridge (Col. 19, lines 50-62).

Regarding claim 16, Fujii discloses the feature information about the virtual feature point is the feature information about a feature point from which a virtual feature point is projected (Col. 19, lines 50-62).

Regarding claim 17, Fujii discloses wherein the feature points to be checked are different in type a matching process is performed by changing relation between ridges containing the feature points and ridges containing the vicinal feature points (Col. 25, lines 31-49).

Regarding claim 18, the arguments analogous to those presented above for claims 1 and 9 are applicable to claim 18.

Regarding claim 19, the arguments analogous to those presented above for claim 13 are applicable to claim 19.

Regarding claim 20, the arguments analogous to those presented above for claim 14 are applicable to claim 20.

Regarding claim 21, Fujii discloses a matching process performed on a combination of the vicinal feature point of the first and second fingerprints and the virtual feature point (Figure 28).

Regarding claim 22, Fujii discloses the first and second fingerprints match in feature points to be checked and vicinal feature points match several times for the feature points to be checked, evaluation of a matching result is enhanced depending on a number of matching results (Col. 12, lines 3-7).

Regarding claims 23 and 45, the arguments analogous to those presented above for claim 1 are applicable to claims 23 and 45.

Regarding claims 31 and 46, the arguments analogous to those presented above for claim 9 are applicable to claims 31 and 46.

Regarding claims 40 and 47, the arguments analogous to those presented above for claim 18 are applicable to claims 40 and 47.

Regarding claims 24-30, 32-39, and 41-44, the arguments analogous to those presented above for claims 2-8, 10-17, and 19-22 are applicable to claims 24-30, 32-39, and 41-44 respectively.

Regarding claim 48, Fujii discloses identifying feature points of the first and second fingerprints in fingerprint ridges (Col. 8, lines 9-22), comparing a target feature point of a ridge of the first fingerprint with a corresponding feature point of a ridge in the second fingerprint (Col. 11, lines 58-67, Col. 12, lines 1-10), comparing feature points neighboring the target and corresponding feature points in corresponding ridges (Col. 8, lines 33-45; Col. 12, lines 3-19), respectively, in the first and second fingerprints, and determining whether there is a match between the first and second feature points responsive to the comparisons (Col. 12, lines 20-29).

Regarding claim 49, Fujii discloses the feature point information comprising one of position, type, and direction are compared (Col. 12, lines 20-29).

#### ***Response to Arguments***

5. Applicant's arguments filed 3/8/04 have been fully considered but they are not persuasive.



Summary of Applicant's Argument: Fujii is directed to a system that performs fingerprint comparison by lengths of or distances on a ridge between a target feature point and a neighboring feature point. The present invention compares feature points not ridge lengths.

Examiner's Response: Fujii discloses comparing feature points including information of other feature points connected thereto and information of other feature points on adjacent ridges (Col. 8, lines 33-38; Col. 9, lines 12-19; Col. 12, lines 3-29), thereby comparing vicinal feature points. The claim language does not exclude comparing lengths or distances. Fujii's disclosure meets the claimed language recited in claims 1-49.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

***Contact Information***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Virginia M Kibler whose telephone number is (703) 306-4072. The examiner can normally be reached on Mon-Thurs 8:00 - 5:30 and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703) 308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Virginia Kibler  
05/17/04

MEHRDAD DASTOURI  
PRIMARY EXAMINER  
